

Amendment to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A method for manufacturing a galvanized steel sheet comprising the steps of:

preparing a hot-dip galvanized steel sheet consisting essentially of 0.05 to 0.30% C, 0.01 to 2.0% Si, 0.08 to 3.0% Mn, 0.003 to 0.1% P, 0 to 0.07% S, 0.01 to 2.5% Al, 0 to 0.007% N, by mass, and the balance being Fe and inevitable impurities;

applying alloying treatment to the hot-dip galvanized steel sheet; and

controlling time and temperature of the alloying treatment in accordance with the formula given below depending on the content of Si and of Al,

$$\text{Si} + \text{Al} = 1.5 \times 10^{-7} \times t^{0.75} \times (T - 465)^3 + 0.117$$

where each of Si and Al is a content by mass contained in the steel sheet, t is the total time (sec) of holding the steel sheet at 465°C or higher temperature on alloying a coating layer thereon, and T is the average temperature (°C) of the steel sheet during the total time t (sec) of holding the steel sheet

at 465°C or higher temperature on alloying the coating layer thereon, thereby the difference in the mechanical properties from those of no alloying treatment gives ΔTS (kgf/mm²) not larger than 2 kgf/mm² and ΔEl (%) not larger than 2%.

2. (currently amended) A method for manufacturing a galvanized steel sheet comprising the steps of:

preparing a hot-dip galvanized steel sheet consisting essentially of 0.05 to 0.30% C, 0.01 to 2.0% Si, 0.08 to 3.0% Mn, 0.003 to 0.1% P, 0 to 0.07% S, 0.01 to 2.5% Al, 0 to 0.007% N, by mass, further at least one element selected from the group consisting of 0.01 to 2.0% Cr, 0.005 to 2.0% V, and 0.005 to 2.0% Mo, by mass, and balance of Fe and inevitable impurities;

applying alloying treatment to the hot-dip galvanized steel sheet; and

controlling time and temperature of the alloying treatment in accordance with the formula given below depending on the content of Si, Al, Cr, Mo, and V,

$$Si + Al + 5 \times Cr + 15 \times Mo + 15 \times V - 1.5 \times 10^{-7} \times t^{0.75} \times (T - 465)^3 + 0.117$$

where each of Si, Al, Cr, Mo and V is a content by mass contained in the steel sheet, t is the total time (sec) of holding the steel sheet at 465°C or higher temperature on

alloying a coating layer thereon, and T is the average temperature($^{\circ}\text{C}$) of the steel sheet during the total time t (sec) of holding the steel sheet at 465°C or higher temperature on alloying the coating layer thereon, thereby the difference in the mechanical properties from those of no alloying treatment gives ΔTS (kgf/mm^2) not larger than 2 kgf/mm^2 and ΔEl (%) not larger than 2%.

3. (original) The method for manufacturing a galvanized steel sheet according to claim 1, wherein the hot-dip galvanized steel sheet further contains at least one element selected from the group consisting of 0.01 to 0.1% Ti, 0.01 to 0.1% Nb, 0.0003 to 0.0050% B, 0.005 to 2.0% Ni, and 0.005 to 2.0% Cu, by mass.

4. (original) The method for manufacturing a galvanized steel sheet according to claim 2, wherein the hot-dip galvanized steel sheet further contains at least one element selected from the group consisting of 0.01 to 0.1% Ti, 0.01 to 0.1% Nb, 0.0003 to 0.0050% B, 0.005 to 2.0% Ni, and 0.005 to 2.0% Cu, by mass.